

STAKEHOLDERS

Report to Stakeholders is a publication of the Edwards Air Force Base Environmental Management Division. Its purpose is to inform and educate the public, base workers and residents about continuing Environmental Management efforts on base. It currently has a circulation of 6,000, including about 2,000 subscribers.

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Next RAB Meeting

May 17, 2007 5:30 p.m. Boron, Calif.

Senior Citizen Center 27177 20 Mule Team Road

The public is invited

If you have a question about the Edwards Air Force Base Environmental Management program, you may address it to Stakeholders Forum, Attn: Gary Hatch or Miriam Horning, 5 E. Popson Ave., Edwards AFB, CA 93524-8060, or send e-mail to: 95ABW.PAE@edwards.af.mil

Environmental Restoration Program

Announcement

There will be a public comment period for the Air Force Research Laboratory Soil and Debris Sites Proposed Plan scheduled March 8 through April 27. A public availability session is set to be held at Boron, Calif., at either the Senior Center or Boron High School from 5:30 to 7:30 p.m. on a date yet to be determined in April.

For more information on the public comment period for the AFRL Soil and Debris Sites Proposed Plan or on the public availability session please call Gary Hatch at 277-1454. He can also be reached via e-mail at 95ABW.PAE@edwards.af.mil

ON THE COVER:

Boron Restoration Advisory Board member Hugh Jamison.



TEST, TEST, TEST — Bill McLard, mechanic and hazardous waste representative for the Precision Impact Range Area, tests the emergency shower while Kathleen Loetzerich, Environmental Research Specialist lead for Zone 6, conducts a routine inspection of the facility.

Environmental Management works hand-in-hand with Units

esert tortoises, air quality, hazardous material and groundwater contamination

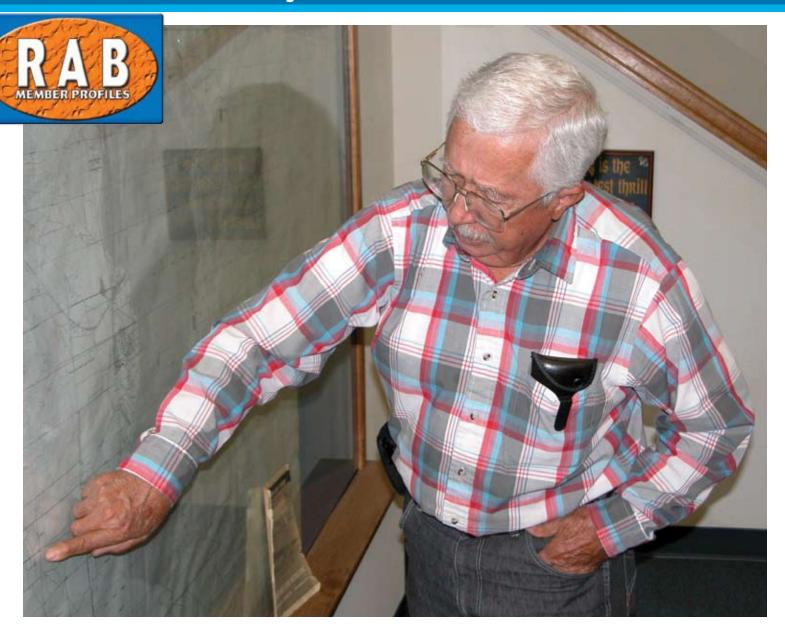
– these are just a few of the issues facing the 44 Unit Environment Coordinators (UEC) at Edwards Air Force Base (AFB).

"They're the ears and eyes of environmental issues for their commanding officers, with their Environmental Resource Specialist (ERS) as additional work force," said April Lawrence, environmental engineer and Environmental Management System (EMS) lead for Edwards AFB.

According to Lawrence, UECs play a crucial role ensuring the base is in compliance with all environmental regulations, including those from the county, state, federal, Department of Defense and Air Force.

The UEC program began at Edwards AFB in 1994. Each two-letter director or unit commander on base is required to appoint at least one UEC to be the chief liaison for their organization. This liaison can be military, contractor or civilian depending upon the needs and employees within that unit. The UECs must be able to accurately report to the

See COORDINATOR, page 7



MUSEUM MAN — Boron public representative Hugh Jamison locates on a map the Saxon Aerospace Museum, which he helped design and construct in the community of Boron.

Jamison has been all over the map

Long-time Mojave Desert resident brings range of experience to RAB

love of history and dedication to public involvement has taken Hugh Jamison all over the Mojave Desert. His most recent adventure has been representing the community of Boron on the Edwards Air Force Base (AFB) Restoration Advisory Board (RAB).

The Boron Community Services District recommended Jamison for the job. When asked to take on the responsibility, Jamison decided he knew enough about the cleanup issues and concerns of his community to accept the offer.

"I've lived and worked in this area for over 50 years," Jamison said. "I thought I could be useful and helpful as a member."

And there are many first-hand experiences Jamison can share with the board. He spent almost 40 years testing rocket motors at the Air Force Research Laboratory (AFRL).

"I remember a huge degreaser pit we had in one of the buildings," Jamison said. "Workers would bring dirty machine parts to the pit area and use trichloroethene to remove the grease. At the time we didn't know it was a hazardous chemical, we just knew it was great for cleaning parts."

Working with chemicals was not something Jamison had to worry about growing up. He lived in Moorpark, a rural community located approximately 50 miles northwest of Los Angeles. The location fostered his long-time love of hunting.

"I started hunting when I was 12 (years old)," Jamison said. "I could walk right out

my back door and hunt for ducks. That's the kind of community I grew up in."

His passion for hunting led Jamison to Piute Ponds — located in the southwestern corner of Edwards AFB — during duck hunting season. He has been a member of the Edwards Rod and Gun Club for more than 47 years, with 35 of those years spent as an honorary lifetime member. It was in this type of environment that he met aviation pioneers such as James Doolittle and Chuck Yeager.

Jamison never had a chance to fly a fighter aircraft but he did serve in the military. He received a draft notice during the Korean War era, dropping out of Ventura College to enlist in the Air Force. From 1951 to 1955, Jamison learned how to fix and test radar, compasses and radios. He fondly remembered being part of the 84th Fighter Interceptor Squadron that used P-51 Mustangs — a historic long-range, single-seat fighter aircraft.

After serving his military duty, Jamison moved to Boron to be near his father, who had been doing mine work in the area since the early 1930s. Jamison himself did a brief stint in the mining industry before a friend referred him to the AFRL. There he worked on the rocket test areas doing instrumentation and data acquisition. He laid cables, worked on instrument panel controls, set up testing equipment and recorded data. One of Jamison's jobs involved documenting electrical connections with more than 2,000 data collection points. He spent 32 years as a civil servant and several years as a government contractor doing this type of

After retiring, Jamison kept himself busy.

He helped design and construct the Col. Vernon P. Saxon Jr. Aerospace Museum (see sidebar for more information) located in the heart of Boron. He also had a hand in organizing the displays and building the counters. As director and part-time volunteer for the museum, Jamison has had an opportunity to meet folks from all over the world.

"We get a lot of interesting people who visit the museum. Some of them have memorabilia that they want to share or a story about a little section of history," Jamison said.

As one of the long-time residents of Boron, Jamison has more than a few of his own historical stories to share. At one point, he caught the gold mining fever and bought a claim with partner Melvin English, another Boron resident. They panned and found some pieces of gold, later leasing the claim to a mining company before selling it.

During his time at the AFRL, Jamison found an arrowhead while out looking for prehistoric rock art, also known as petroglyphs. After contacting Environmental Management, an archaeologist came out to collect the arrowhead and visit the site. Jamison later received a letter describing the history and purpose of the arrowhead.

Jamison is still making history with his involvement in community projects. He represents the Boron community on another committee known as the Edwards Community Alliance (ECA). This committee was established in 2001 in response to Congress's military base realignment and closure efforts. The ECA's purpose is to support the continued

viability of Edwards AFB and the Air Force Flight Test Center. Edwards AFB is an important source of income in the Antelope Valley, employing people from the surrounding communities and putting money back into the local economy.

One of the ECA's current projects involves finding a solution to the difficulty in attracting and retaining scientific experts. The proposal is to open a four-year college in the Antelope Valley geared specifically toward educating engineers and scientists.

"The idea is to grow our own engineers and scientists who will stay in the area after college, instead of trying to entice graduates from faraway cities," Jamison said.

Jamison looks forward to his opportunity as a RAB member to keep information flowing between the base and his community.

"I wasn't sure exactly what my role would be as a RAB member," Jamison said. "But I understand that I am here primarily to promote two-way communication between Boron and Edwards (AFB)."

The RAB is comprised of elected volunteers from communities surrounding Edwards AFB, federal and state regulators, and base officials. The purpose of the board is to provide a forum for two-way communication between the base restoration officials and the public regarding cleanup of hazardous contamination left over from past military activity.

RTS

Saxon Aerospace Museum

The Museum: Saxon Aerospace Museum

- · Named after Colonel Vernon P. Saxon, Jr.
- Located in the heart of Boron
- Opened in September 2003
- Dedicated to preserving flight history performed over Boron and the surrounding Antelope Valley

The Man: Colonel Vernon P. Saxon, Jr.

- Stationed at Edwards AFB 11 times for a total of 17 years
- Logged more than 4,000 flight hours
- Former Air Force Flight Test Center Vice Commander

- Once served as Air Force Co-Chair on the RAB
- Loved flying at Edwards AFB and completed countless missions over the town of Boron
- Died of cancer in 1997

The Town: Boron

- Located 55 miles northeast of Lancaster
- Nicknamed the "Northern Gateway to the Aerospace Valley"
- Has served as the approach corridor for aircraft landing at Edwards AFB for more than 60 years

For more information, visit the Saxon Museum Web site: http://www.saxonaerospacemuseum.org/history.html

SURFACE FEATURES SHED LIGHT ABOUT WHAT LIES BELOW

dwards Air Force Base (AFB) has a diverse collection of surface geologic features ranging from the largest dry lakebed in North America to yardangs, sometimes described as petrified sand dunes. These geologic features shed light about what lies beneath the surface, which can be important for planning environmental cleanup efforts.

Environmental program managers can get information about a site's properties through its geologic history. A site's properties affect the cleanup method used to treat the contamination at that site.

"The surface and subsurface geologic materials are the medium onto and into which contaminants have been released," said Mike Anderson, a contractor at Environmental Management. "Understanding the fundamental properties of the geologic layers underlying a site is essential to the effective operation of remediation (cleanup) systems whether they are done *ex situ* or *in situ*."

Ex situ cleanup systems involve pumping groundwater out, treating it and returning it to its original site or disposing of it in some other manner. In situ cleanup systems involve injecting biological or chemical compounds into the groundwater or otherwise treating contamination beneath the ground surface.

The surface or visible features at Edwards AFB provide information that helps scientists identify potential underground issues.

"A few sites (on base) are located over sandy sedimentary deposits where extracting the contaminated groundwater for treatment, or injecting treatment chemicals into groundwater, is straightforward," he said. "Locating, characterizing, modeling and cleaning up contaminants in fractures in granitic bedrock is the primary difficulty posed by the local geology."

Understanding how loosely the soil is packed, the ability of liquids or gases to pass through it, which direction cracks run, and other geologic features help scientists determine where to drill, how deep to drill and what sort of treatment system will work better.

In addition to understanding the properties of the geologic

materials, scientists study the hydrologic characteristics of a given site. Hydrology is the scientific study of the properties, distribution and effects of water on the Earth's surface, in the soil and underlying rocks, and in the atmosphere. The hydrologic properties reveal how much water exists at a given site, the quality of it and how it moves or migrates through the geologic material. Knowing surface, underground geologic and hydrologic properties of a given site helps scientists estimate where and how quickly contamination has migrated, or will migrate, to surrounding areas. With this information they can use numerical computer models to estimate how long it will take for the contamination to spread.

"Most cleanup failures are not due to system engineering deficiencies, but rather are due to the failure to understand the hydrologic properties of the geology underground," Anderson said. Recognizing the geologic layers and the hydrologic conditions of contaminated sites aids scientists in selecting treatment systems that best fit a given site.

Geologic layers underlying the Antelope Valley can date back to 25 million years ago. For instance, roughly two million to 10,000 years ago, the Edwards AFB area was covered with water. This area, called Lake Thompson, included Rogers Dry Lakebed, Rosamond Dry Lakebed, Lancaster, Rosamond and parts of Quartz Hill. Geologic and climate changes caused the lake to dry; and now, about 80 percent of it is covered by dune sediments.

Some of the surface geologic features at Edwards AFB are: Red Hill, a volcanic feature; Haystack Butte, a neck of volcanic material from which the original volcano has eroded away; Leuhman Ridge, a steep, rocky granite ridge, a granitic pluton, or a magmacrystallized rock body; granite "rock piles" made up of rounded boulders that were shaped by physical and chemical weathering; sand dunes; yardangs; and the nearly flat clay of the dry lakebeds.





INSPECTION — Because of its long distance from Main Base, the Precision Impact Range Area (PIRA) includes its own Hazardous Material Distribution Support Center. Checking products for proper labeling are (L to R) Bruce Carroll, Unit Environmental Coordinator for PIRA, Bill McLard and Kathleen Loetzerich.

COORDINATOR

From page 3

Environmental Management Division on their organization's regulatory compliance, thereby supporting base efforts to reduce and prevent environmental pollution through a proactive EMS program.

"We're involved in every aspect of environmental issues on base," said Kathleen Loetzerich, contractor and ERS lead for Zone 6. "I see the UEC as the manager and the ERS is the right hand. If I see something important, I report back to my UEC."

Loetzerich recalled a recent situation that could have had a negative environmental

impact, but was diverted through a team effort. A diesel-powered generator was shipped to the Precision Impact Range Area (PIRA) from another state with much lower air quality standards than California. When Loetzerich realized this, she notified Bruce Carroll, range superintendent and UEC for PIRA. A different generator was sent to be used at the project site immediately, and the original generator eventually was sent back to its home state without ever being used on base.

In an effort to effectively manage the base's daily environmental impacts, Edwards AFB has been divided into specific environmental support zones based on geographic, organizational and mission requirements. (See sidebar).

Under the zone program, regular and frequent internal inspections are effectively accomplished by resource specialists. The focus is on quickly fixing problems, as opposed to large-scale annual inspections by experts with a focus on enforcement.

"The UEC is basically a facilitator who's responsible for making sure things are operating properly and that's accomplished through an open line of communication," Carroll said. "Our job is to make sure missions are being supported, while rules are being obeyed."

According to Carroll, whose portion of Zone 6 includes the PIRA, the mechanics also play a crucial role in monitoring the hazardous material at that site.

"They're good hard workers out there," Carroll said, "They do their jobs right and make my job easier."

The UECs can be involved in a number of projects ranging from as small as a can of spray paint to as large as a 747 aircraft. John Kalita, contractor and UEC with Zone 4, recently was involved in an extensive project with the Airborne Laser (ABL).

"The ABL deals with a lot of chemicals," said Kalita. "There is the equivalent of an oil refinery in the fuselage of the modified 747, with miles and miles of tubing. We recently completed a four-month project involving a fuselage that was no longer needed for testing, so it was decontaminated and prepared for recycling."

According to Lawrence and Loetzerich, UECs should have a general working knowledge of environmental management and a broad detailed knowledge of their organization.

"These people are very important," said Lawrence, "they have to make sure the base is complying with all of the many environmental requirements as defined by local, state and federal laws."

Support Zones

Zone 1 – Air Force Research Laboratory (AFRL)

Zone 2 - Main Base/South

Zone 3 – Main Base/North

Zone 4 - South Base

Zone 5 – Flightline

Zone 6 – North Base, West Base and PIRA

Zone 7 - All other areas

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Where to Find More

INFORMATION

Published data and documents relating to the Environmental Restoration Program are available for public review in information repositories at four locations. The current information repositories are located in the cities of Boron, Lancaster and Rosamond, as well as Edwards AFB. They are updated when new documents are released.

If you have any questions about information in the repositories, please contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or by e-mail at 95ABW.PAE@edwards.af.mil.

Location **Days** Hours 9:30 a.m. - 7 p.m. 9:30 a.m. - 6 p.m. **Edwards AFB Library** Mon-Thurs 5 W. Yeager Blvd. Fri Building 2665 Sat & Sun 10:30 a.m. - 6 p.m. Edwards AFB, Calif. (661) 275-2665 **Kern County Public Library** Tues & Wed Noon - 8 p.m. Wanda Kirk Branch Thurs-Sat 10 a.m. - 6 p.m. 3611 Rosamond Blvd. Rosamond, Calif. (661) 256-3236 **Los Angeles County Public Library** Mon-Wed 10 a.m. - 8 p.m. 601 W. Lancaster Blvd. Thurs & Fri 10 a.m. - 5 p.m. 11 a.m. - 5 p.m. Lancaster, Calif. Sat (661) 948-5029 Col. Vernon P. Saxon, Jr. Mon-Sun 10 a.m. - 4 p.m. Aerospace Museum 26922 Twenty Mule Team Road Boron, Calif. (760) 762-6600



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